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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,485	11/20/2001	Mark E. Tuttle	MI40-337	8903
21567	7590	08/26/2004	EXAMINER	
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201			LEE, BENJAMIN C	
			ART UNIT	PAPER NUMBER
			2632	
DATE MAILED: 08/26/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,485

Applicant(s)

TUTTLE, MARK E.

Examiner

Benjamin C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 69-93 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 75-82 and 91 is/are allowed.
- 6) ☒ Claim(s) 69-74, 83, 84, 86-90, 92 and 93 is/are rejected.
- 7) ☒ Claim(s) 85 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

Claims Status

1. Claims 69-93 are pending.

Claim Rejections - 35 USC § 103

2. Claims 69-74, 83-84 and 86-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunnarsson (US pat. #5,552,790) in view of Tuttle et al. (US pat. #5,448,110).

1) In considering claim 69:

a) Gunnarsson teaches a remote intelligent communication device comprising a ground plane (38 of Fig. 5b); and antenna (37 of Figs. 5a-5b) spaced apart from and interacting with the ground plane (capacitively coupled according to col. 8, lines 37-39), the antenna being SUBSTANTIALLY electrically insulated from the ground plane (Fig. 5b where 37 is separated from 38 by dielectric 39); an integrated circuit (electronic component 45 of Figs. 5a-5b shown as an IC chip form and transponder integrated circuitry according to col. 6, line 22 to col. 7, line 11, and especially col. 7, lines 7-11) coupled with the antenna and including a receiver (col. 8, line 49); and having a housing having planar outermost surfaces using a covering of communication signal transparent protection foils (55, 56 of Figs. 5b and 4b and col. 9, lines 1-2) ;

While:

b) Tuttle et al. teaches in a remote intelligent communication device for various applications including object/people location, tracking and inventory control, etc. (col. 1, lines 16-65 and col. 2, lines 20-24) the use of an encapsulant (30, 42 according to Fig. 4D and the laminating/sealing process involved on col. 8, lines 51-55 and according to the Abstract; wherein such sealing constitutes an encapsulation and the layers 30, 32 constitute encapsulant according

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to col. 2, lines 35-36) configured to form a housing about the antenna and the integrated circuit, the encapsulant comprising an outermost planar surface of the housing (Fig. 4D).

In view of the teachings by Gunnarsson and Tuttle et al., it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to utilize a known housing encapsulation of Tuttle et al. in place of the foil-covering for providing an encapsulated protective housing for the transponder device of Gunnarsson to better guard it against the environmental elements as well as minor shock or other physical damage while maintaining the signal transparency characteristics intended by choosing any encapsulant that does not significantly block signals.

2) In considering claim 70, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in claim 69, including:

--the claimed said encapsulant encapsulates and contacts the antenna (Figs. 2, 3, 5a, 8, 9 & 11 of Tuttle et al.)

3) In considering claim 71, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in claim 69, including:

--the claimed said integrated circuit includes a modulator configured to communicate using back-scatter communication (col. 6, lines 27-49 of Gunnarsson, which describes the characteristic operation of back-scatter communication.)

4) In considering claim 72, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in claim 69, including:

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-- claimed power source (52 of Gunnarsson) coupled with the integrated circuit (Figs. 5a-5b of Gunnarsson) and the ground plane (Figs. 4a-4b and capacitively coupled according to col. 8, lines 37-39 of Gunnarsson).

5) In considering claim 73, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in claim 69, including:

--the claimed said encapsulant encapsulates and contacts the integrated circuit (Fig. 4D of Tuttle et al., whereby 58 is also interpreted as part of the encapsulant, in light of the proximity of the integrated circuit to the transponder exterior in Figs. 4a-4b of Gunnarsson for encapsulation).

6) In considering claim 74, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in claim 69, including:

--the claimed RFID communication circuitry (Figs. 1A-1B of Tuttle et al.; col. 1, lines 15-27 and col. 6, lines 47-49 of Gunnarsson).

7) In considering claims 83, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in the consideration of claim 70, plus the formation steps of Tuttle et al. throughout the disclosure including the printing of antenna (e.g. see Abstract).

8) In considering claim 84, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in claim 83, including:

--the claimed providing a dielectric layer intermediate the ground plane and antenna (Fig. 5b of Gunnarsson.)

9) In considering claim 86, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as claim 84, wherein:

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-- the claimed forming the housing to contact a portion of the dielectric layer is met by the sealing encapsulation of the whole transponder package of Tuttle et al. and Gunnarsson, whereby side edges of the housing encapsulation contacts the dielectric layer.

10) In considering claim 87, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in claim 83, plus the consideration of claim 71 regarding the backscatter communication modulator of the integrated circuit.

11) In considering claims 88, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in the consideration of claim 74, plus the formation steps of Tuttle et al. throughout the disclosure, whereby:

a) the ground plane constitutes the claimed conductive layer over which the antenna and integrated circuit are formed according to Figs. 5a-5b of Gunnarsson;

b) total encapsulation over the whole device housing inherently results in a substantially void-free mass.

12) In considering claim 89, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in claim 88, whereby:

Since the "ground plane" is for providing electrical ground, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to ground such ground plane conductive layer in a device such as taught by Gunnarsson and Tuttle et al. before encapsulation to ensure that undue charge has not been accumulated on the ground plane as a result of static charge accumulation during manufacturing processes or handling so that it can truly work as a "ground" plane as intended.

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3. Claim 92 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gunnarsson in view of Tuttle et al. and Alicot et al. (US pat. #5,859,587).

1) In considering claim 92, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in claim 83, wherein:

Gunnarsson did not specify the manufacturing method for the antenna, while Tuttle et al. teaches using printing to implement the antenna (Abstract). However, conductive-ink printing to form a transponder antennas has been known in the art. For example, Alicot et al. teaches the known use of conductive-ink-printing to implement an antenna for a transponder (col. 2, lines 7-9). It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to use a known conductive ink-printing technique such as taught by Alicot et al. to implement the printed antenna of Gunnarsson and Tuttle et al. in order to provide a thin and consistent antenna trace for minimized size of the antenna and as a result the whole transponder housing for convenient carriage by monitored users/objects.

4. Claims 90 and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunnarsson in view of Tuttle et al., Brady et al. (US pat. #5,826,328) and Baird (US pat. #5,252,783).

1) In considering claims 90 and 93, Gunnarsson and Tuttle et al. made obvious all of the claimed subject matter as in claim 88, except:

the claimed flowing a flowable encapsulant over the entirety of the antenna and integrated circuit and curing the encapsulation.

While Tuttle et al. discloses curing the encapsulation (Fig. 4D) over the entirety of the antenna and integrated circuit for encapsulation of the entire transponder, but not using a flowing

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type encapsulant, such use of flowable encapsulant for encapsulation has been known in the art. For example, Brady et al. teaches such known encapsulation (col. 5, line 64 to col. 6, line 10) of liquid encapsulant injection molding while Baird clarifies that such injection molding can involve curing of the encapsulant to solidify it (col. 2, lines 35-51).

In view of the above teachings, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention that a flowable encapsulating procedure such as taught by Brady et al. can be used as an alternative to provide the protective outer housing of the device of Gunnarsson and Tuttle et al., and further including the curing as taught by Baird that comes with such injection molding encapsulation to ensure strength, stableness and longevity of the encapsulant.

Allowable Subject Matter

5. Claims 75-91 are allowed.
6. Claim 85 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Applicant's Question Regarding IDS PTO-1449 filed 11/3/03 (Paper #4)

7. PTO-1449 is for listing of prior art references relative to the current application. Documents that have not been published (e.g. applications that never became patents or publications, including abandoned applications), Applicant's own patents patented less than one year before the effective filing date of the currently application (8/20/1997), and any patent/publication whose effective filing dates not predating the effective filing date of the

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currently application, ARE NOT QUALIFIED AS PRIOR ART, and therefore should not appear on PTO-1449.

Response to Arguments

8. Applicant's arguments with respect to claims 69-93 have been considered but are moot in view of the new ground(s) of rejection. See above rejection for detail

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) US pats. 5376943, 4751513, 5020136, 4830038, 5963132, 5735040

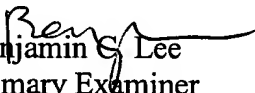
--Similar use of encapsulation or ground plane on a communication device.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin C. Lee whose telephone number is (703) 306-4223.

The examiner can normally be reached on Mon -Fri 11:00Am-7:30Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (703) 308-6730. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8576.


Benjamin C. Lee
Primary Examiner
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